QUALITY EVALUATION OF ACADEMIC LIBRARY: THE LIBQUAL+® METHODOLOGY AND ITS PERSPECTIVES OF IMPLEMENTATION IN BRAZIL

Gisele Ferreira de Brito
Graduate Student in Information Science
Universidade de São Paulo (USP)
Brazil

Waldomiro de Castro Santos Vergueiro
Associate Professor
Universidade de São Paulo (USP)
Brazil

ABSTRACT

The purpose of this paper is to discuss the thematic of customer-centered quality in academic libraries and contribute to the importance of quality evaluations based on the perception of their customers for this type of library. It is especially important in Brazil, where evaluations of higher education institutions and their infrastructure items, including libraries, are compulsory. It highlights a specific methodology, the LibQUAL+®, created in the United States and used in hundreds of libraries around the world, but without any perceptible application in Brazil as yet. From the analysis of LibQUAL+® assessment procedures, the article aims to present the benefits that can be achieved from the application of this methodology as well as it intends to verify the possibilities of using it in academic libraries in Brazil. It concludes that the methodology presents aspects which can support the academic library management, as identifying strong and weak points of the services, becoming closer to the library’s customers’ needs, comparing the library performance with other libraries and defining the best practices in the field, besides contributing to a more professional management of the libraries.

Keywords: Academic Libraries; Customer Services; Quality; Customer Satisfaction; LibQUAL+®.

1 INTRODUCTION

This article is part of a research which is being developed in the master's degree graduate program in Information Science of the Escola de Comunicações e Artes (ECA) of the Universidade de São Paulo (USP). According to the conception of
Andrade (2010), this is a basic and descriptive research that aims to discuss customer-centered measures of quality evaluation of academic libraries, in order to introduce the possibility of implementing the LibQUAL+® methodology in Brazil.

The bibliographic and documentary research is one of the adopted methodological procedures for conducting the survey and analysis of bibliographical sources for the structuring of the theoretical references. International databases were searched for collecting articles, books, legislation, papers of scientific events and theses. This procedure has allowed the preliminary construction of the theoretical framework initially composed by the theme of customer-centered quality in academic libraries, followed by the importance of quality evaluation for this type of library, especially in Brazil. As a result, the quality evaluation model of academic libraries, based on the perception of their customers, the LibQUAL+® is presented.

2 BACKGROUND

The quality of information services should aim the improvement of its services in order to meet or even surpass customers' expectations. For Hernon and Altman (1995, p.6) it does not matter what information professionals think about the quality level of their services and as much as some of them may consider that their customers are not capable of evaluating the information services properly, and consider very poorly their opinions, "[…] if customers say there is quality service, then there is".

The same reasoning is followed by Vergueiro (2000), who states that many professionals do not realize the inadequacy of their working practices, imagining that they are offering their best in the circumstances to which they are subjected but they forget that there is another point of view besides the professional - the customer's -, and this mismatch of perceptions may generate a level of service below the satisfactory, compromising its quality. For this reason, a tool that can listen to the customer needs in order to improve the quality of information services is necessary. This is where the evaluation comes to hand.
More than evaluating services, the library professional must have a less systematic overview of his work, that is, a more open approach to the market, including the customers in the evaluation process and, from this point on, considering them the last judges of the excellence of the services. After all, the relationship with customers is the most important aspect of the activities of the information professional (VERGUEIRO, 2007).

This prerogative is not new. In the 1930s, Ranganathan advocated the importance of customers to the library services in his laws of Librarianship: the books are for use; every reader his (or her) book; every book its reader; save the time of the reader; the library is a growing organism. Vergueiro (2002) sees the contribution of these laws there are contributions to aspects of library service quality and Lancaster (1996), to aspects of evaluation.

Vergueiro (2002) has found in the Ranganathan’s laws the expression of elements that have been approached by quality theorists, such as the product information professionals work with, the importance of the customer and the search for the satisfaction of their needs efficiently, the need to define work processes that save time for that customer, as well as the understanding that the information services are dynamic and growing organisms.

On his turn, Lancaster (1996, p.11-14) identifies in the Ranganathan’s laws aspects to be considered in the evaluation processes:

1st Law: focus on accessibility-"[…] can the service make an item accessible to a requester, at the time he or she needs it, from whatever source, in whatever acceptable form?" (p.11-12);

2nd Law: focus on availability- "[…] it is not enough that the library owns the book wanted for a user; It is not enough that an item sought by a user is owned by the library; it must also be available when needed" (p.12);

3rd Law: focus on dissemination-"[…] a library should therefore be evaluated in the terms of its ability to inform people of the materials of potential use to them" (p.12);
4th Law: focus on efficiency - it must consider the value of the time spent by the customer, i.e. "[...] in the cost-effectiveness analysis of information services, all costs, including all user costs, must usually be taken into account" (p.13);

5th Law: focus on adaptation to news conditions: changing social conditions and technological developments, but commonly confused with accumulation of information-materials - "[...] libraries should also be evaluated in terms of the extent to which they are able to capitalize on the capabilities provided by technology" (p.14).

For Lancaster (1996) there are several reasons for a library manager wanting to evaluate the services provided:

a) to establish a scale to show in what level of the performance the service is currently operating;

b) simply to justify its existence;

c) to identify possible causes of failures or inefficiency of the service;

d) to compare the performance of various libraries or services.

For Lancaster (1996) the evaluation of information services can be subjective or objective: "[...] subjective studies based on opinions do not cease to be useful, as it is important to know what people feel in relation to the service" (1996, p.10) and adds that this type of evaluation can and should be followed by objective, quantifiable criteria and procedures.

In the same direction, Lubisco (2011b) states that, as the object of evaluation, organizational performance are measured both objectively (by data collected from management reports) as well as in a subjective way (from data on customer satisfaction). For her, these two dimensions are complementary, never excluding elements.

Likewise, the International Federation of Library Associations and Institutions (IFLA), in its International Guidelines for Performance Measurement in Academic Libraries, considers extremely useful that the indicators be followed by topics obtained by a user satisfaction survey in order to confirm or explain the results (POLL; BOEKHORST, 1996).
In this sense, an initiative of the Association of Research Libraries (ARL), has demonstrated to be quite suitable for the evaluation of academic libraries, considering the point of view of their customers: the LibQUAL+® methodology (where Lib, library and QUAL, for quality). However, even though it is already twelve years old in its implementation in academic libraries of various countries, there is no record of experiences in Brazil.

This article aims to contribute to the importance of evaluation for the Brazilian academic libraries, bringing to the discussion the LibQUAL+® methodology and its possible contribution to quality evaluation purposes. It also intends to discuss the perspectives for its implementation in Brazil.

3 QUALITY EVALUATION IN INFORMATION SERVICES

Libraries are an important part of higher education institutions, for this reason they do not exist by themselves, but rather to promote institutional missions, usually regarding the development and production of knowledge in teaching, research, and extension and innovation activities. In Brazil, in the educational area, regulating agencies demand a strict quality control to ensure that educational institutions can be accredited or to remain in operation. As part of the infrastructure of these institutions, libraries must evaluate their services.

One of the mechanisms for evaluating higher education in Brazil is the Sistema Nacional de Avaliação da Educação Superior (SINAES) [National Evaluation System of Higher Education] created by the Ministério da Educação (MEC) [Ministry of Education] in 2004 by the Law 10,861 (BRASIL, 2004), that evaluates, among other things: the teaching, the research, extension, the social responsibility, the student performance, the management of the institution, the faculty and facilities.

SINAES includes the following evaluations:

a) Evaluation of the institution, covering the self-assessment, to be conducted by a Comissão Própria de Avaliação (CPA) [Committee of Evaluation] of each institution and the on-the-spot external evaluation, to
be conducted by a committee of evaluators designated by \textit{Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira} (INEP);

b) Evaluation of the undergraduate courses, that aims to identify the conditions of education offered to students, in particular those relating to the profile of the faculty, physical facilities and the didactic-pedagogical organization;

c) Performance evaluation of Undergraduate students, to be held by the \textit{Exame Nacional de Desempenho dos Estudantes} (ENADE) [Students National Examination Performance], which submit the students at the end of the first year and the last year of the course to a specific exam (BRAZIL, 2004).

Especially, the self-assessment brings to the libraries the opportunity of defining the tool that best captures the perception of their academic community towards their services; however, reports of these experiences were not identified in the Brazilian literature in the area of Library and Information Science, which leads to believe that the own CPA of the universities have been in charge of these evaluations.

In 2007, considering insufficient and inadequate the official instruments for the evaluation of university library in Brazil, Nidia Lubisco defended, in her doctoral dissertation carried out in Spain (LUBISCO, 2007), the need to understand the library as something beyond a university infrastructure item, but rather as a pedagogical resource of higher education institutions. For this, she tried to create a model of evaluation from a theoretical proposition that encompassed all of the functions of an university library, based on comprehensive study about Latin American situation, mainly of university libraries from Brazil, Spain, Mexico, Argentina and Chile. This model, to be efficient, must be discussed and validated at the national level. For this reason, she had the idea of organising a University Library Evaluation Seminar for discussing the subject. It has already had two editions, one in September 2008 and another one in June 2012.

Lubisco’s evaluation model (2011a) presents the criteria analysis of groups of \textbf{indicators} (emphasis added) and, therefore, constitutes the objective part of the
evaluation. This fact enables the understanding that the proposal in question can be complemented by the subjective aspect of the evaluation through a methodology that captures customer perceptions about the academic library, forming a set of evaluative processes that can be applied in Government assessments, contributing to a national library statistic, today still nonexistent in Brazil.

The literature in Library and Information Science shows that issues such as customer-centered quality and evaluative processes from the perception of the users are still incipient in Brazil. In review of the literature on quality management in information services in Brazil, Valls and Vergueiro (2006) situated in the early 1990s the first reports on the implementation of quality information services in Brazil, and only in 2000s the appearance of quality studies focused on customers and their evaluation processes. Among them, the SERVQUAL and LibQUAL+® methodologies stand out.

4 LIBQUAL+®’S BACKGROUND: THE SERVQUAL METHOD

The first specific model for services evaluation in order to capture criteria for quality services evaluation was assigned to Parasuraman, Zeithaml and Berry (1988). The evaluation criteria created by these authors take into account the gaps, or rather, the differences between users’ expectations and what is actually offered to them. They have considered these gaps as major obstacles in trying to achieve a level of excellence in services provision.

With their study of Gaps, Parasuraman, Zeithaml and Berry (1985) had already given an important contribution to the area. However, as the model did not offer any tool that could measure service quality, the same researchers created in 1988 a scale - that they called SERVQUAL -, in order to analyze qualitatively and quantitatively the degree of customer satisfaction in relation towards the offered services (PARASURAMAN; ZEITHAML; BERRY, 1988).

According to Parasuraman, Zeithaml and Berry (1988), customers evaluate service quality comparing what they want and/or expect with what they get. The method points out five dimensions of quality service, as shown in Figure 1.
The instrument was originally designed by its creators as a questionnaire with twenty-two assertions prepared and distributed among the five dimensions of quality of SERVQUAL method (as shown in table 1). These assertions are intended to evaluate aspects of quality in relation to customers’ expectations and perceptions, from a Likert scale, enabling the calculation of gaps.

At first moment, SERVQUAL was applied to five categories of service: maintenance and repair of household equipment, retail banking, long distance telephony, insurance brokerage and credit cards. However, the authors state that the instrument was designed to be applicable to a variety of services (LOURES, 2009). It can be said that the SERVQUAL method has represented a break in the process of evaluating services and spurred a large number of studies in the area, and many other surveys have refined the conceptual model of Parasuraman and his partners.
SERVQUAL had applications in libraries, with emphasis on the studies of Cook and Thompson (2000), reporting the application in libraries of University of Texas A&M in 1995, 1997, 1999, Sahu (2007) on the application in the library of the Jawaharlal Nehru University (India), as well as Nejati and Nejati (2008), in the library of the University of Tehran (India).

Among the experiences of Brazilian libraries using the method created by Parasuraman, Zeithaml and Berry (1988), SERVQUAL, the studies are presented in Frame 1.

Frame 1: Experiences of SERVQUAL application in Brazilian libraries.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampaio and collaborators</td>
<td>2004</td>
<td>Report on the development of the Program of Quality Evaluation, in the libraries of the Integrated System of Libraries of the University of São Paulo (SIBI/USP)</td>
</tr>
<tr>
<td>Igami, Sampaio and Vergueiro</td>
<td>2005</td>
<td>Exposition of the results gotten in the evaluation of the Library of the Institute of Nuclear Energy Research</td>
</tr>
<tr>
<td>Freitas, Bolsanello and Viana</td>
<td>2008</td>
<td>Description of the experience of services evaluation of the Library of the Center of Science and Technology of the State University of North Fluminense.</td>
</tr>
<tr>
<td>Brito and Vergueiro</td>
<td>2010</td>
<td>Application of SERVQUAL method in Paulo Ernesto Tolle Library, of the Business School Foundation Álvares Penteado</td>
</tr>
</tbody>
</table>

Source: Elaborated by authors.

Studies on SERVQUAL in libraries admit that the methodology helps breaking the merely professional vision of the service, creating bonds with customers and decreasing the distance between them and the service management, contributing significantly to services management, especially for decision-making and services development. However, the methodology also presents disadvantages, such as: having the data collection instrument composed only by closed questions; not allowing customers to express their opinions, criticisms and suggestions; limiting the research to quantitative data; needing some kind of adjustments regarding the terminology used in the instrument – as, for example, replacing the word ‘expectation’ for ‘importance’ and the term ‘perception’ for ‘satisfaction’.

5 THE LIBQUAL+® METHOD
The specific evaluation tool for use in libraries, called LibQUAL+® - Lib (library) and QUAL (quality) - has its history closely linked to the evaluations experiences developed by Texas A&M University (TAMU) using the SERVQUAL methodology.

After three consecutive applications of SERVQUAL in the libraries of TAMU, in 1995, 1997 and 1999, Fred Heath and Colleen Cook, then members of the dean of the libraries’ office, concluded that the methodology developed by their university colleagues, professors Parasuraman, Zeithaml and Berry, were heavily focused on the commercial and profitable sector and included items considered irrelevant by library customers, such as the question about library staff costume, for example (LIBQUAL, c2012a).

For this reason, in 1999 Cook, then a PhD student, with one of her professors of statistics in TAMU, Bruce Thompson, requested assistance in developing a specific method for libraries evaluation starting from SERVQUAL. Afterwards, the three researchers, Cook, Thompson and Heath - at that time, members of ARL Council - offered the evaluation method they have developed named LibQUAL to ARL as part of the ARL Program Statistics and Evaluation (ARL’s New Initiative Measure²) for non-profit use and libraries improvement (COOK; MACIEL, 2010; THOMPSON, [2008?]).

In spring 2000, with the support of the US Department of Education Fund for the Improvement of the Post-Secondary Education (FIPSE) Grant, the LibQUAL+® was applied to a group of 13 libraries associates to ARL, having inaugurated one evaluation program based on web that would happen, from then on, in an annual basis (COOK; MACIEL, 2010; LIBQUAL, c2012a)

It is possible to say that LibQUAL+® was developed to satisfy the need to perform a research within libraries in order to compare and evaluate their services for benchmarking and identification of best practices purposes (COOK, 2005).

LibQUAL+® aims to:

- Foster a culture of excellence in providing library service;
- Help libraries better understand user perceptions of library service quality;
- Collect and interpret library user feedback systematically over time;
- Provide libraries with comparable assessment information from peer institutions;
- Identify best practices in library service; and
- Enhance library staff members’ analytical skills for interpreting and acting on data (COOK; MACIEL, 2010, p.5; GREEN; KYRILLIDOU, 2012, p.11).

As time goes by, due to an extensive use by libraries around the world, the LibQUAL+® has been revised and improved. In its current version, the instrument contains 22 questions with a free comments field and demographic questions. The survey also contains five additional questions related to information literacy, three questions for satisfaction in general and three more questions about the use of libraries and search portals. Optionally, the library can choose five questions from a database with about 120 questions for additional research. If this option is chosen, these five questions are added to the main part of the survey, comprising then, 27 questions. Since 2010, the LibQUAL+® has a Lite version, which is actually a stripped-down version of the original instrument. In LibQUAL+® Lite, the customer must answer only eight of the 22 questions of the instrument. This selection is made randomly by the system and aims to optimize the time of the respondent (from nine minutes for the 22 questions version to five minutes in the Lite version). Either way, the library will have at the end of the process, the answers for of all 22 questions (COOK; MACIEL, 2010; GREEN; KYRILLIDOU, 2012).

ARL allows the use of the LibQUAL+® by the payment of a fee that guarantees to the associate the access to the system to configure and administer the survey, collect and track the responses. After research completion, the final summary of the data access remains at the library’s disposal: information on representativeness, the raw data files in CSV format, the SPSS syntax file, the comments from the survey, and the ‘Results Notebook’ containing the analysis of the survey results. Registration also gives access to the summary of the data and the ‘Results Notebook’ of all institutions that conducted research using the LibQUAL+® in the given year, enabling the benchmarking with other institutions. Currently, the rates are around $ 5,500 comprehending registration, annual fee and training (LIBQUAL, c2012c).
LibQUAL+® methodology currently has several manuals, tutorials available on its Web site. Following, the procedures will be briefly presented.

Developed from a SERVQUAL adaptation for use in libraries, based on statistical studies it reduced the five SERVQUAL dimensions to just three, and then renamed them in order to meet the needs of library service quality evaluation: the Affect of service; Information Control, and Library as place, as shown in Figure 2.

Figure 2: LIBQUAL+® dimensions of service.

![Diagram of LIBQUAL+® dimensions]

Source Adapted: Cook and Maciel – 2010.

The LibQUAL+® instrument uses a standard methodology for data collection and analysis based on the theory of gaps, where respondents must assign each of the 22 issues a score on a nine-point scale from three perspectives: the minimum level of service; the desired level of service; the observed or perceived level of service, as shown in Figure 3.
There are two services gap scores on LibQUAL+®. A quality service must have the perception score somewhere between the minimum level of service at the lowest end of the scale and the desired level of service at the higher end. Figure 4 presents three scores assigned to a question of the instrument displayed as points on a line. The gap between the minimum level and the desired level defines what the methodology establishes as zone of tolerance (COOK; MACIEL, 2010).

**Figure 3: LIBQUAL+® instrument detail.**

![LIBQUAL+® instrument detail](image)

**Source: LibQUAL - c2012b.**

**Figure 4: LIBQUAL+® gaps methodology.**

![LIBQUAL+® gaps methodology](image)

**Source: LibQUAL - c2012b.**
The first part of Figure 4 refers to the superiority of a service, which is calculated by subtracting the desired level score and the perceived score by the customer in a given question. In Figure 4, the gap is negative because the perception of quality is lower than the client desired quality.

The radar chart is adopted by LibQUAL+® to compile the results of the three scores (minimum, maximum, and perceived) of 22 questions of the instrument. In this graph, each question of the instrument has the averages of services scores (minimum, desired and perceived) presented as points on a line, where the areas between each point are highlighted in different colors, as shown in Figure 5.

**Figure 5: Graphical presentation of the LIBQUAL+® scores.**

![Graphical presentation of the LIBQUAL+® scores.](source: LibQUAL - c2012b.)

To obtain the radar chart, the lines (each of them representing the 22 questions of the LibQUAL+® instrument) are aligned as if they were streaks of a car wheel, as shown in Figure 6.

**Figure 6: LIBQUAL+® radar chart composition.**

![LIBQUAL+® radar chart composition.](source: LibQUAL - c2012b.)
The questions of each dimension of the instrument (Affect of Service, Information Control, and Library as Place) are grouped in the radar chart, as shown in Figure 7.

**Figure 7: LIBQUAL+® radar chart.**

In this graph, each line is marked by two different colors: the red indicates that the perceived quality is less than the minimum desired; the blue, that the perceived quality is greater than the minimum desired; the yellow, that the perceived quality is less than the desired quality; while the green color indicates that the perceived quality is greater than the desired quality.

From the observation of each dimension, the library manager can study the customer perceptions and the performance of the library in each area (questions) that composes the dimension. Each dimension may show a distinct pattern of customer perceptions regarding the quality of library services. These results, when compared to other similar institutions, will allow the manager to identify the areas where improvements are needed, using benchmarking.

On the other hand, observing the chart as a whole, the manager will have an overview on the quality of services provided by the library. The color-coding makes it easy to identify the areas that need improvements and also those in which the library has already reached the expectations of its customers.
6 FINAL CONSIDERATIONS

Considering the reality of the Brazilian academic libraries, LibQUAL+®, will contribute to a more professional administration, providing an appropriate tool for planning and decision-making. In addition, the methodology introduces convergences with other management practices, as well as quality, and assists in the establishment of a knowledge basis on customers and services. If well managed, it will ensure an environment of wide circulation and dissemination of knowledge, the spreading of creativity and the creation of new ideas and learning from the past, consolidating the knowledge management, and optimizing the librarians’ time, who, besides the management, also have to deal with the technical and service activities of the libraries.

It is important to have in mind that the methodology can contribute effectively to government assessments, if adopted on a national basis. Being a methodology already tested and used in hundreds of libraries around the world, it enables the creation of a national library statistics database and demonstrates the value of libraries to their institutions and the community. The key role that library and librarians’ associations can have in this endeavor can also be emphasized, as happened with the ARL contribution to the development of American and Canadian academic libraries. In Brazil, the Brazilian Committee of University Libraries (CBBU) can, in our opinion, assume the role of presenting to INEP/MEC the most appropriate methodologies for evaluation of higher education institutions in what regards to libraries, as suggested here and in other studies, like the indicators proposed by Nídia Lubisco (2007).

The analysis of LibQUAL+® methodology makes it possible to deduce that it presents aspects that support management, as, for example, the identification of strengths and weaknesses of the services provided by the library and the help in the planning and decision-making process. Generally speaking, it works in the development of library services. In case of changes in the services, it can, when consistently used, monitor the effect of those changes.
Another aspect must also be considered: LibQUAL+® implementation brings the library closer to the customers, creating the opportunity to enhance and improve the status of the library in the community it serves and also helping it in obtaining more economic resources for the library. Once adopted by other libraries, the method allows performance comparisons, enabling the identification of best practices, including the establishment of a library ranking, as well as the creation of a national library statistics database, making it possible to compare statistical data on local, national, and inter-institutional levels.

Last but not least, in times of Internet, where Google and other online information providers have been considered competitors for libraries, more than ever have the latter to justify their existence, presenting a positive cost-benefit ratio to their customers, developing links and helping them achieving their goals so that they can realize libraries’ value when compared to their competitors. In short, the LibQUAL+® methodology responds to what has been stated by Lancaster in relation to the purposes of evaluation of library services.

With the use of an evaluation methodology like LibQUAL+®, Brazilian academic libraries can also count on an effective channel of communication with their customers, as well as the results of the evaluation can help their public relations policy. By creating these channels, libraries will make their achievements transparent to their customers, helping society to better understand their importance, which can result in financial gains both in the form of subsidies as in image.

7 AKNOWLEDGEMENTS

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REFERENCES


NOTES

1 This article adopts the term customer, although in the literature in the area of Library and Information Science are found other denominations, such as readers or users. In this sense, it agrees with McKee (2000, p.2) when he considers that the term user can represent adherence to a philosophy of service that recognizes the provider as the sole judge of quality, a somewhat passive meaning, that is, from someone who just uses a service for a lack of choice or adapt to predetermined something. On the other hand, according to the same author, the term customer brings the idea of proactivity, of someone who chooses to use a service rather than doing something else.

2 The ARL Statistics and Assessment program focuses on describing and measuring the performance of research libraries and their contributions to research, scholarship, and community service. ARL serves a leadership role in the development, testing, and application of academic library performance measures, statistics, and management tools. Grounded in the tradition of the North American research library environment, the program provides analysis and reports of quantitative and qualitative indicators of library collections, personnel, and services by using a variety of evidence gathering mechanisms, and tools. Available: <http://www.arl.org/stats/>. Access: May 15, 2012.

Gisele Ferreira de Brito
Graduate Student in Information Science
Escola de Comunicação e Artes
Universidade de São Paulo (USP)
E-Mail: Gisele.Brito@Usp.Br
Brazil

Waldomiro de Castro Santos Vergueiro
Associate Professor
Escola de Comunicação e Artes
Universidade de São Paulo (USP)
E-Mail: Wdcsverg@Usp.Br
Brazil